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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/783,841	02/13/2001	Brian Wilk	42390P9993	2580

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BLAKELY SOKOLOFF TAYLOR & ZAFMAN
12400 WILSHIRE BOULEVARD, SEVENTH FLOOR
LOS ANGELES, CA 90025

EXAMINER

NGUYEN, TUNG X

ART UNIT	PAPER NUMBER
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2829

DATE MAILED: 03/31/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/783,841

Applicant(s)

WILK, BRIAN

Examiner

Tung X Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 March 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. The RCE filed on 3/4/03 has been entered and made of record as papers No. 8,
9. The claims 1-20 are present for examiner.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-13, 20, are rejected under 35 U.S.C. 103(a) as being unpatentable over Nam (u.s.p 5,850,148), in view of Deshayes (u.s.p 6,356,090).

As to claims 1-2, 8-9, Nam discloses in Fig. 4B, a probe pin array comprising: a housing (20, 20a) having a first surface (the top of 20) and second surface (the bottom of 20a); and a plurality of probe pins (19) extending between said housing first (the top of 20) and second surface (the bottom of 20a), wherein the plurality of probe pins extend substantially perpendicularly from said housing second surface (it is clear on the fig. 4b) and wherein said plurality of probe pins each further include a leading end having a taper; Nam does not disclose or suggest the taper between about 10 and 25 degrees. However, Deshayes discloses in Fig. 3a, a probe pin array having a very pointed end (col. 4, lines 4-6); it means that the probe pin appears to have the taper about between 10-25 degrees to achieve accurately signal from DUT and high quality contact to DUT. It would have been obvious to a person having ordinary skill in the art at

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the time the invention was made to modify the system of Nam, and provide a probe having a very pointed tip between about 10-25 degrees, as taught by Deshayes to achieve accurately signal from DUT and high quality contact to DUT; Further, It would have been an obvious matter of design choice to taper the tip in this amount and get a high quality contact to DUT, since such a modification would have involved a mere change in the size of a component. A change in size is generally recognized as being within the level of ordinary skill in the art. *In re Rose*, 105 USPQ 237 (CCPA 1955).

As claims 3, 10, Nam discloses in col. 5, lines 12-14, a pin plated with gold.

As to claims 4, 11, Nam in view of Deshayes disclose the claimed invention except for the plurality of probe pins each has a diameter of between about 30% and 60% of a diameter of a pin of a pin grid array microelectronic device to be inserted into a socket to be tested by said plurality of probe pins. However, It would have been obvious to one having ordinary skill in the art at the time the invention was made to choose appropriate range of a diameter of probe pins, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

As to claims 5-6, 12-13, 20, Nam discloses in Fig. 4B, the probe pin array, further including an alignment guide (18) having a chamfered surface (outside of 18) with an angle of between about 45 and 70 degrees or 60 degrees from planar with said housing second surface. However, It would have been obvious to one having ordinary skill in the art at the time the invention was made to choose appropriate range of a chamfered surface, since it has been held that where the general conditions of a claim are

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disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

As to claim 7, Nam discloses in Fig. 4B, the probe pin array comprising: a housing having a first surface (top of 20) and a second surface (bottom of 20a); a plurality of none-spring loaded probe pins (19) extending between said housing first surface and said housing said second surface, wherein said plurality of none-spring loaded probe pins extend substantially perpendicularly from said housing second surface (it is clear in Fig. 4B); and at least one alignment guide (18) extending from said housing second surface (20a) having at least one chamfered surface (see Examiner's label) oriented toward said plurality of none-spring probe pins (19).

4. Claims 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Frederickson et al. (u.s.p 5,955,888), in view of Nam (u.s.p 5,850,148).

As to claim 14, Frederickson et al. disclose in Fig. 6B, the probe pin array comprising: a housing (650, 640, 646, 610) having a first surface (top 650) and a second surface (bottom 610); a carrier (670) having a first surface (bottom 670) and a second surface (top 670), wherein said carrier second surface abuts said housing first surface (via 690); a plurality of probe pins (620) extending between said carrier first surface (bottom 670) and said housing second surface (bottom 650) and extending between said housing first surface (top 650) and said housing second surface (bottom 650), wherein said plurality of probe pins extend substantially perpendicularly from said housing second surface; and at least one alignment guide (680) extending from said housing second surface (bottom 650) having at least one chamfered surface (680) oriented toward said plurality of probe pins (Col. 7, lines 37-42). Frederickson et al. do

not teach or suggest a plurality of none-spring loaded probe pins. However, Nam discloses in Fig. 4B, the plurality of probe pins are none-spring loaded probe pins. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the system of Frederickson et al., and provide a plurality of none-spring loaded probe pins, as taught by Nam for getting contact well.

5. Claims 15-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Frederickson et al. (u.s.p 5,955,888), in view of Nam (u.s.p 5,850,148), and further in view of Deshayes.

As to claim 15-16, Frederickson et al., in view of Nam do not disclose, the taper between about 10 and 25 degrees. However, Deshayes discloses in Fig. 3a, a probe pin array having a very pointed end (col. 4, lines 4-6); it appears that the taper between about 10 and 25 degrees. Further, It would have been an obvious matter of design choice to get a high quality contact, since such a modification would have involved a mere change in the size of a component. A change in size is generally recognized as being within the level of ordinary skill in the art. In re Rose, 105 USPQ 237 (CCPA 1955).

As claim 17, Nam discloses in col. 5, lines 12-14, a pin plated with gold.

As to claim 18, Nam in view of Deshayes disclose the claimed invention except for the plurality of probe pins each has a diameter of between about 30% and 60% of a diameter of a pin of a pin grid array microelectronic device to be inserted into a socket to be tested by said plurality of probe pins. However, It would have been obvious to one having ordinary skill in the art at the time the invention was made to choose appropriate range of a diameter of probe pins, since it has been held that where the general

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conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

As to claim 19, Nam discloses in Fig. 4B, the probe pin array, further including an alignment guide (18) having a chamfered surface (outside of 18) with an angle of between about 45 and 70 degrees or 60 degrees from planar with said housing second surface. However, It would have been obvious to one having ordinary skill in the art at the time the invention was made to choose appropriate range of a chamfered surface, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

Response to Arguments

6. Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tung X Nguyen whose telephone number is (703) 305-3337. The examiner can normally be reached on 8:30am-5:00pm M-F.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kamand Cuneo can be reached on (703)-308-1233. The fax phone numbers for the organization where this application or proceeding is assigned are (703)

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308-5841 for regular communications and (703) 308-5841 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

TN
March 18, 2003



KAMAND CUNEO
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800